



WP8 in 7 Days

Part 1.0

Microsoft AppSatr #4Afrika

@BhakitahTech



Introduction:

- As a developer you shouldn't be living life not accomplishing goals you've set for yourself in concrete or passing.
- Learning how to develop is rewarding in and of itself.
- Once you learn how to develop there isn't much standing between you and apps *you* want to use that don't exist yet....or that fancy idea you have to bring it to the reality.
- Being a Developer, the first thing that comes in mind is what are the cool features that are supported by this WP8 Phones and what magically I can have access and create wonderful user empowering solutions.
- Yes you are right, indeed what do these Smart Phones do support, but before then lets have a look on these beautiful phones!!

The beautiful hardware ranges from Nokia, Samsung, Htc, Huawei....



Features:

- These phones comes with great capabilities that as a developer you opt to utilize in depth!
 1. More Screen resolutions (800x480, 1280x720, 1280x768Portrait, Landscape)
 2. Increased RAM: 1GB or 512MB
 3. Removable, encrypt able storage
 4. NFC
 5. New multicore chipset
 6. New graphics processor
 7. Customized User Controls designed for you: (Panorama, Pivot, ListPicker,Long ListSelector)

Fancy staff for you!!

- A. Let your app be the screen Lock!! Its so simple, you can register your app as a lock screen provider, which enables:
 - User can select your app as the lock screen background image provider.
 - User can select your app to show detailed status on the lock screen.
 - User can select your app as one of the five apps to show quick status (icon and count).
- B. Using the Tile templates and Different Tile sizes
 - A. Flip – The tile flips from front to back
 - B. conic – clean iconic layout designed to reflect WP design principles.
 - C. Cycle – The tiles cycles through up to nine images of selection.

C. WP8 allows you to enable users to robustly interact with your app using their **voice**

- **Speech Recognition and Text-to-Speech API**

This feature allows the app to read text while in the context of your app via text-to-speech also allowing user to input their own voice

- **Voice Commands**

This feature allows users to deep-link into your app by holding down the Start button and speaking a prefix you specify for your app, followed by a command that you define.

D. Cool UI Controls: These features include

- Pivot and Panorama
- WebBrowsercontrol now based on Internet Explorer 10
- LongList selector!

E. WP8 provides some new **Maps controls** use technology supplied by Nokia Here Maps

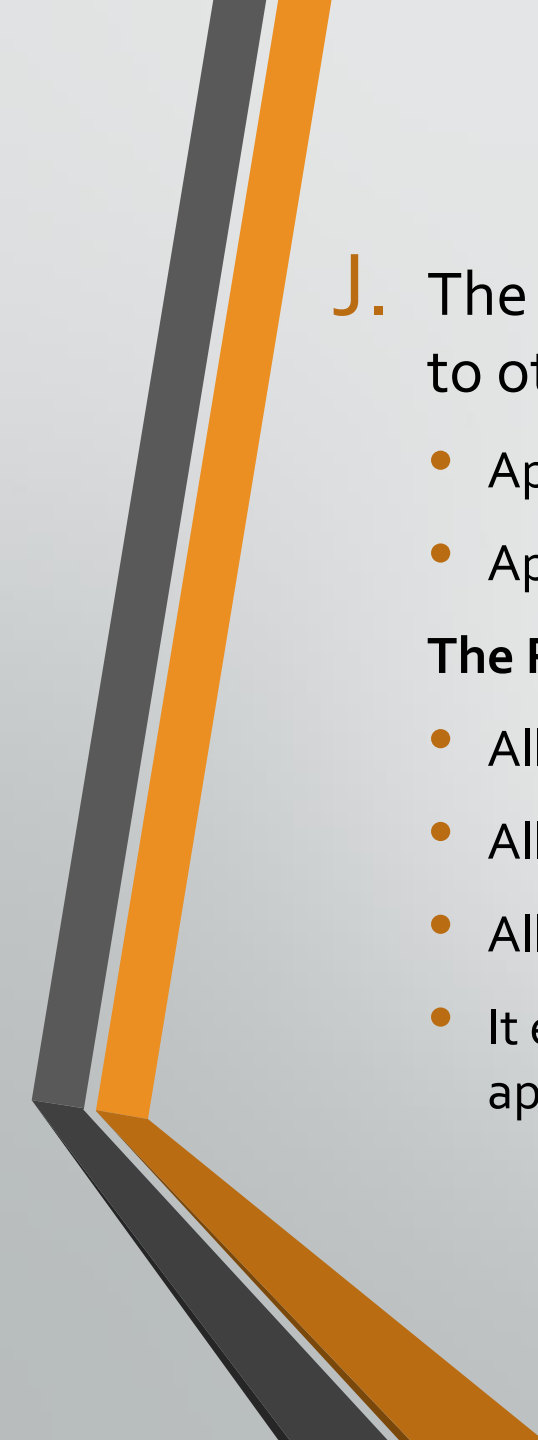
- Display landmark and pedestrian features
- Four cartographic map modes
- Vector-based for faster rendering
- Light and dark colormodes

F. Some Additional features, yeah the **New Launchers**

- ShareMediaTask
- SaveAppointmentTask
- MapsTask
- MapsDirectionsTask
- MapDownloaderTask
- MapUpdaterTask

G. Wow, and I can't forget to mention its support for the Wallet!!!

- DealsSupports NFC .
- Credit & Debit Cards.
- Loyalty & Membership .
- CardsAccess Saved .



J. The features are so many.... You can also create apps that communicates to other phones via Bluetooth :

- App-to-app communication
- App-to-device communication

The Proximity API :

- Allows app-to-app connection using Bluetooth technology
- Allows the user to send data between devices using NFC.
- Allows one to use a phone to interact with NFC tags .
- It enables one to establish a Wi-Fi, Bluetooth, or Wi-Fi Direct connection between your app and an instance of your app on a proximate device



H. The .NET API for Windows Phone is the primary managed API

- These includes all the types and APIs from WP 7.1
- Has classes and types from the System and Microsoft.Phone namespaces

I. There have been new classes added for Windows Phone 8.0, for example

- Microsoft.Phone.Storage.ExternalStorage – it allows one to read files from an SD card ,use SD card to extend device storage for their personal files and media (Store photos, music, videos)
- Microsoft.Phone.Networking.Voip

How are these WP8 and Windows 8 have in common for you!

- As a developer, one of the big question is, how extensive is the Phone capability do support and commonness with Windows 8 devices – Tablets, PC...
 - WP8 gets the support for **multi-core** and other hardware features that Windows 8 has.
 - The hardware manufacturers work with the **same driver model** on both WP8 and Windows 8.
 - The OS components such as the **kernel, networking, graphics support, file system and multimedia** are the same on both WP8 & Windows 8.

Where do you start:

- Indeed the question should be, as developer, How easy am I to get tools and the machinery to develop for WP8, do I have to endure cost??!!
 - Don't worry, the WP Developer Center is your base for all things Windows Phone related where you can download the SDK for free. (Remember you do not need a WP Developer account to download the SDK and start developing apps). But you can register here <http://dev.windowsphone.com>
 - The **Dreamspark Account** will enable you get the License for you after the Trial Dates expires and much more tools and tutorials for free. Just get in touch with a Microsoft Evangelist team or any AppStar for assistance.
 - Not interested in coding, get to www.apps.windowsstore.com and use the online template to generate the code for you, so easy just copy and paste your content and your app is ready for publication.

Ooops! What are the resources required!

- Don't freak out, as a developer we always want a strong machine, that won't keep on 'hanging' cause it can't process some simple codes!!
- The WP8 SDK is a brainy child that just and I mean Just requires
 - ✓ Supported operating systems: **Windows 8 64-bit (x64) client versions**
 - ✓ Hardware: **8 GB of free disk space, 4 GB of RAM (recommended), 64-bit (x64) motherboard!**
 - Windows Phone Emulator: **Windows 8 Pro or higher (for Hyper-V) and Second Level Address Translation (SLAT)** - Slat is supported by PC's that are Intel-based processors that start with i(e.g., i3, i5, i7, i9) or any CPUs based on the Nehalem, Westmere, or Sandybridge micro-architectures
- I know that's not too much to ask for!!

You now have the Tools!

- Hmm, so now you have the tools and you're sold on the opportunity. What's next?
- As a developer remember your time is a valuable asset and you probably want to make the most efficient use of it as possible as you can.
- You can start right away to code an app for Windows Phone 8 by creating a new project using one of the installed templates.

Now how can you manage you Code??

When you developing your WP8 app, you have all this option to fit your area of expertise in pogramming

1. UI defined using XAML
2. Logic written using C# or Visual Basic .NET
3. Access .NET APIs and Windows Phone Runtime APIs

Do you also intend to develop a game?

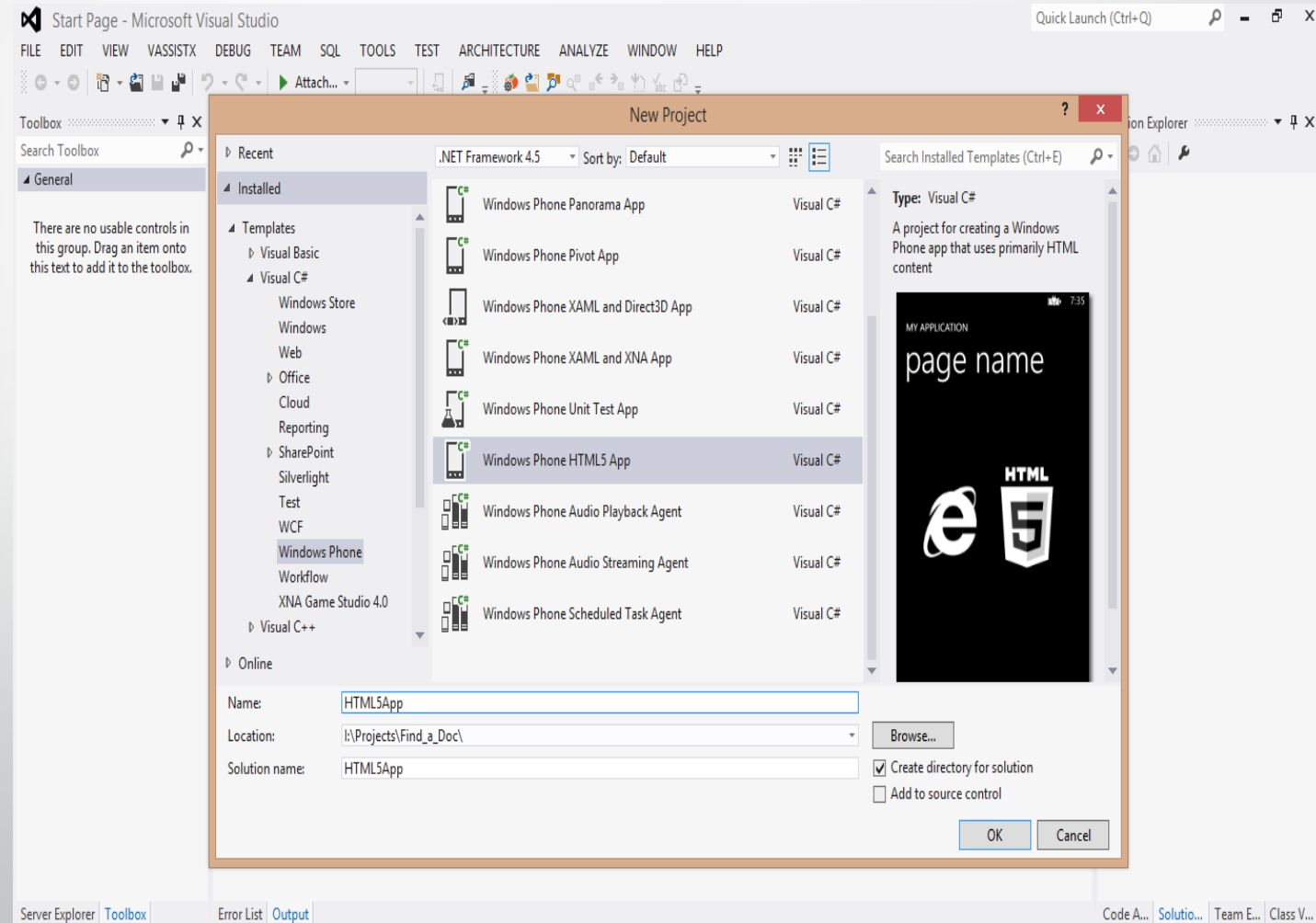
- You can develop games for Windows Phone using the XNA framework
 - Same new project templates as Visual Studio 2010!!
 - Use logic written using C# or Visual Basic .NET
 - It's the same functionality as in WP 7.1
 - Have access to .NET 7.1 APIs, not Windows Phone 8 APIs

Are you worrying of coming up with a 3D app or Game?

- Direct 3D app can be written entirely in native code, and which use only Direct 3D for its UI .
- You can build managed apps using XAML that incorporate graphics created by a Direct 3D native library .
 - This allows addition of powerful graphics to XAML UIs
 - Use also the WP Direct 3D with XAML App project template – Its available in Visual C#, Visual Basic and Visual C++ categories in the Add New Project dialogue

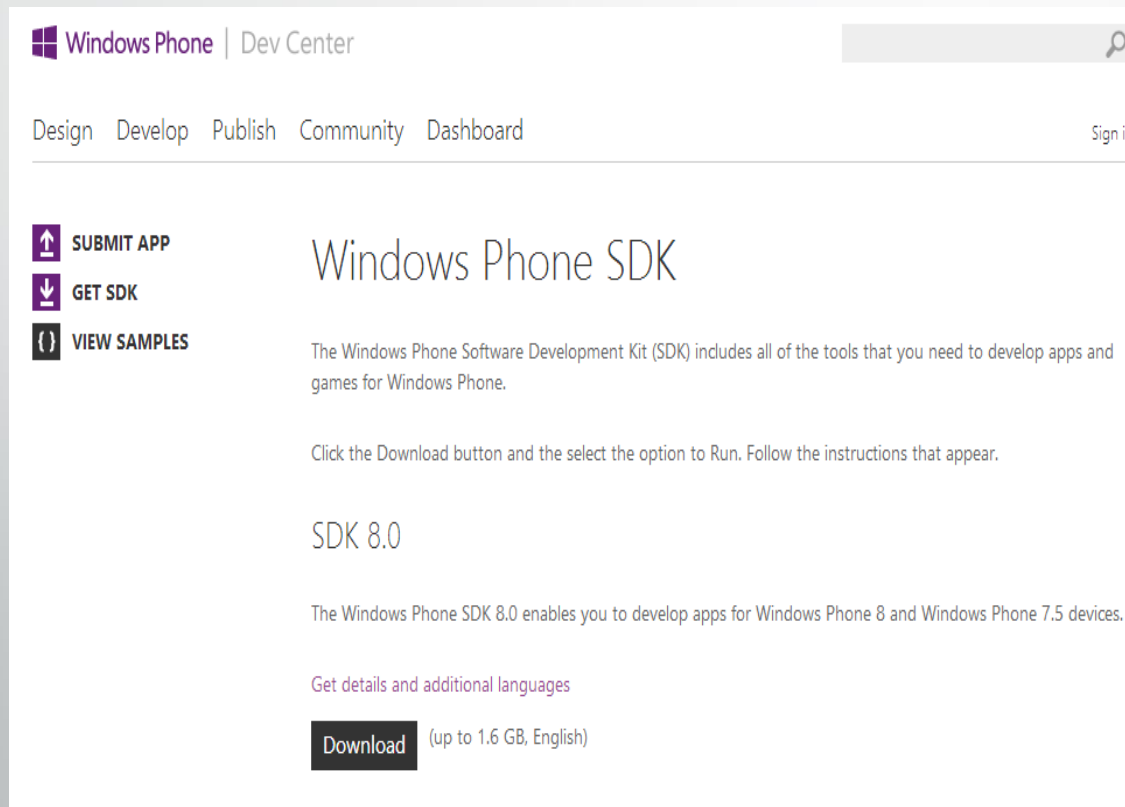
Do you like HTML5?

- Ooops! HTML5/JavaScript app development is not supported on WP8 but you can build HTML5-based apps rendered in the WebBrowser against local or web-based content .



Preparing the Development Environment

- Download the Windows Phone SDK 8.0 and double click the executable file.
- You can read the complete license terms and conditions by clicking on License Terms. Then, activate the license acceptance checkbox and click INSTALL. Click Yes when Windows User Account Control (UAC) asks you for permission to continue. Take into account that the Windows Phone SDK 8.0 installation might disable/enable networks during setup. In addition, if you haven't activated Hyper-V on Windows 8, you will need to restart your computer during the installation process. Good Luck!



Windows Phone | Dev Center

Design Develop Publish Community Dashboard Sign in

SUBMIT APP
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VIEW SAMPLES

Windows Phone SDK

The Windows Phone Software Development Kit (SDK) includes all of the tools that you need to develop apps and games for Windows Phone.

Click the Download button and then select the option to Run. Follow the instructions that appear.

SDK 8.0

The Windows Phone SDK 8.0 enables you to develop apps for Windows Phone 8 and Windows Phone 7.5 devices.

[Get details and additional languages](#)

Download (up to 1.6 GB, English)



Windows Phone

SDK 8.0

Setup requires 5.50 GB in:
C:\Program Files (x86)\Microsoft Visual Studio 11.0

You must agree to the [License Terms](#) before you can install the product.

Visual Studio 2012 automatically sends information to Microsoft about your installation experience and notifies you when an update is available and connects you to content online. To learn more, see the [Privacy Statement](#).

Network may get disabled Intermittently during Setup.

I agree to the [License terms and conditions](#).

Join the [Customer Experience Improvement Program](#) to help improve the quality, reliability and performance of Visual Studio.

INSTALL

Windows Phone Emulator

- The emulator runs as a Hyper-V virtual machine on PC and is supplied with the SDK so no worry how to install it.
- The WP Emulator Now have 4 emulators (emulators for different screen resolutions):
 - WVGA 512MB (Is now the low spec emulator)
 - 720p
 - WVGA (Full VGA)
 - WXGA
- You can easily use the Simulation Dashboard in VS 2012 to manage the emulator environment. Such as control the quality and availability of the network connection.
- Use **PgUp/PgDn** key to switch between using the emulator keyboard and PC keyboard.

Easy Start:

- Now that we have downloaded and installed the tools, it is time to begin our first project. Open Visual Studio and select **File -> New Project**.
- Relax this is how cool it is in WP development!



Windows Phone 8 Programming

Tools for Coding

- **The Toolbox** contains Windows Phone Controls that you can add to your application. Samples includes: TextBox, Buttons, Images and more.
- **The Design View** displays what your Windows Phone 7 application looks like real-time as you build the application.
- **The XAML View** displays the current XAML that makes up the screen shown in #2.
- **The Solution Explorer Window** displays all of the files that make up your application. This typically includes images and project files.
- **The Properties Window** allows you to change certain characteristics of the controls added to the phone application.

Snap view of the Development environment

The screenshot displays the Microsoft Visual Studio IDE with the following components and annotations:

- Design Layout:** A visual representation of the application page on a mobile device. It features a black background with the text "MY APPLICATION" and "page name". A red arrow labeled "Design Layout" points to this area.
- Code Layout:** The XAML code for the page, showing the class name "HTML5App.MainPage" and various XML namespaces and controls. A red arrow labeled "Code Layout" points to this area.
- Tool Box:** A list of UI controls such as Pointer, Border, Button, and TextBox. A red arrow labeled "Tool Box" points to this area.
- Solution Explorer:** A tree view showing the project structure, including files like App.xaml, LocalizedStrings.cs, and MainPage.xaml. A red arrow labeled "Solution Explorer" points to this area.
- Output Window:** A window at the bottom showing the build output, including deployment and emulator connection messages. A red arrow labeled "Output Window" points to this area.

```
<phone:PhoneApplicationPage
  x:Class="HTML5App.MainPage"
  xmlns="http://schemas.microsoft.com/winfx/2006/05/xaml"
  xmlns:x="http://schemas.microsoft.com/winfx/2006/05/xaml"
  xmlns:phone="clr-namespace:Microsoft.Phone.Controls;assembly=Microsoft.Phone.Controls"
  xmlns:shell="clr-namespace:Microsoft.Phone.Shell;assembly=Microsoft.Phone.Shell"
  xmlns:d="http://schemas.microsoft.com/expression/2010/declarative"
  xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
  mc:Ignorable="d"
  FontFamily="{StaticResource PhoneFontFamilyNormal}"
  FontSize="{StaticResource PhoneFontSizeNormal}"
  Foreground="{StaticResource PhoneForegroundColor}"
  SupportedOrientations="Portrait" Orientation="Portrait"
  shell:SystemTray.IsVisible="True">

  <!--LayoutRoot is the root grid where all page content is placed-->
  <Grid x:Name="LayoutRoot" Background="Transparent"
        <Grid.RowDefinitions>
          <RowDefinition Height="Auto"/>
          <RowDefinition Height="*"/>
        </Grid.RowDefinitions>

  <!-- LOCALIZATION NOTE:
  To localize the displayed strings and keys in the app's neutral language,
  replace the following placeholders with the localized string or key:
  -->
```

About the author

I am a Game & Software Developer, Tutor & Mentor.

Google+: <http://gplus.to/pbosoa>

Quick Links: www.kapes.yolasite.com

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